

Perancangan dan implementasi sistem warehouse supply chain management berbasis blockchain menggunakan hyperledger composer dan hyperledger fabric = Design and implementation of blockchain based warehouse supply chain management using hyperledger composer and hyperledger fabric

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Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20489605&lokasi=lokal>

Abstrak

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Sistem supply chain management akan diimplementasikan kedalam blockchain menggunakan Hyperldger Blockchain. Proses yang dilalui adalah dengan menentukan bisnis model yang diperlukan dan kemudian mendesain ulang bisnis model untuk diterapkan ke dalam Hyperledger Composer. Hasil dari penelitian ini membuktikan bahwa blockchain berhasil diimplementasikan kedalam sistem supply chain management menggunakan hyperledger fabric dan hyperledger composer. Akses Read memiliki durasi yang paling cepat, yaitu dengan rata- rata lebih cepat 33 dibandingkan dengan Create, 69 dibandingkan dengan Delete, serta 82 dibandingkan dengan Update. Update memiliki rata-rata durasi akses data paling panjang. Selain itu Query sangat memperlambat durasi akses data fungsi Read dengan durasi rata-rata akses data fungsi Read pada kategori 10 material naik hingga 12238,9, pada kategori 100 material naik 1950 serta pada kategori 1000 material naik 308 dari durasi akses data fungsi Read tanpa menggunakan query.

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ABSTRACT

Supply chain management system will be implemented into blockchain by using Hyperldger Blockchain. The process that goes through is to determine the business model needed, then redesigning the business model to be applied to the blockchain system using Hyperledger Composer. The results of this study prove that the blockchain was successfully implemented into the supply chain management system by using hyperledger fabric and hyperledger composer. Read access has the fastest duration, which is 33 faster than Create, 69 compared to Delete, and 82 compared to Update. Updates have the longest average duration of data access. Besides that, Query greatly slows down the duration of data access Read function with the average duration of data access Read function in category 10 material rose to 12238.9, in category 100 material rose by 1950 and in category 1000 material increased by 308 from duration of data access function Read without using a query.